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Variation of Mean Temperature with height in NW England

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Monthly mean temperature records for the years 1963-1969 were analysed for the following stations.

	Height above MSL (feet)
Carlisle	86
Grizedale	300
Newton Rigg	560
Kielder Castle	660
Spadeadam	900
Malham Tarn	1297
Moor House	1825
Great Dun Fell	2780

The results were:-

Month	Height-Temp Correlation	Temp gradient of 7 year means	Highest Gradient in 1 year	Lowest Gradient in 1 year	Mean Temperature Gradient °C/100m
January	-0.98	0.178	0.198	0.144	0.59
February	-0.97	0.202	0.212	0.163	0.66
March	-0.99	0.223	0.245	0.181	0.73
April	-0.99	0.222	0.240	0.204	0.73
May	-0.98	0.207	0.235	0.179	0.68
June	-0.98	0.194	0.230	0.176	0.64
July	-0.98	0.195	0.205	0.178	0.64
August	-0.98	0.194	0.207	0.188	0.64
September	-0.98	0.187	0.196	0.178	0.61
October	-0.98	0.181	0.219	0.155	0.59
November	-0.98	0.182	0.209	0.118	0.60
December	-0.97	0.175	0.201	0.145	0.58

The year to year variations in gradient could not be linked with the winds of the month in question.

Any comments or suggestions on this paper should be referred to the author.

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Bracknell

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